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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/616,283	07/14/2000	Timothy T. Goodnow	109. 111. 114	6499

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EXAMINER
HINES, JANA A

ART UNIT	PAPER NUMBER
1645	18

DATE MAILED: 02/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Applicati n No.	Applicant(s)	
	09/616,283	GOODNOW, TIMOTHY T.	
	Examiner	Art Unit	
	Ja-Na A Hines	1645	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 October 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8,14-18 and 23-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8, 14-18 and 23-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Amendment Entry

1. Applicants amendment filed October 15, 2002 has been entered. Claims 1, 2, 7, 8, 14, 15, 17 and 18 have been amended. Claims 23-34 have been newly added. Claims 1-8, 14-18 and 23-34 are under consideration in this office action.

Withdrawal of Rejections

2. The rejection of the following claims have been withdrawn in view of applicants amendments:

a) the rejection of claims 1-8 and 14-18 under 35 U.S.C. 112, first paragraph;

b) the rejection of claim 18 under 35 U.S.C. 112, second paragraph.

Response to Arguments

3. Applicant's arguments filed October 15, 2002 have been fully considered but they are not persuasive.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. The rejection of claims 1, 3-6, 14, 16, 23-34 under 35 U.S.C. 103(a) as being unpatentable over Chan (EP 461, 462) in view of McLaughlin and Tadler et al., is

maintained for reasons already of record. The rejection was on the grounds that it would have been prima facie obvious to modify the simultaneous multiple analyte detection immunoassay taught by Chan by incorporating a set of binding agents as taught by McLaughlin and Tadler et al., since McLaughlin teach antibodies which specifically bind to gram-negative bacteria in order to determine their presence and/or absence while Tadler et al., teach well known binding agents that binds lipotechoic acid of gram-positive bacteria in assays.

Applicants argue that Chan teach multiple discrete tests sites while the instant claims are directed to one test which indicates the presence of multiple analytes.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the feature upon which applicant relies i.e., one test which indicates the presence of multiple analytes is not recited in the rejected claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The claims as written encompass testing using both discrete test sites and single test sites. Therefore, applicants' argument is not persuasive since the claims are not limited in such a way.

Applicants argue that Chan does not teach or suggest using a pan-generic binding agent. However, again, the claims fail to recite such binding agents. The claims simply state that the binding agent must bind either a gram negative or positive bacteria. The prior art references teach binding agents capable of binding either a gram negative or gram-positive agent. Therefore, the prior art meets the limitations of the

claims. And applicants' argument is not persuasive, since the claims are not limited to a scope commensurate with applicants' arguments.

In response to applicant's arguments against the Chan reference individually, stating that Chan fails to disclose the immunoassay claimed, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Therefore applicants' argument is not persuasive, since the rejection is based upon Chan (EP 461, 462) in view of McLaughlin and Tadler et al., and their teachings as a whole.

The MPEP section 2123 teaches that patents are relevant as prior art for all they contain, "The use of patents as references is not limited to what the patentees describe as their own inventions or to the problems with which they are concerned. They are part of the literature of the art, relevant for all they contain." *In re Heck*, 699 F.2d 1331, 1332-33, 216 USPQ 1038, 1039 (Fed. Cir. 1983) (quoting *In re Lemelson*, 397 F.2d 1006, 1009, 158 USPQ 275, 277 (CCPA 1968)). A reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill the art, including nonpreferred embodiments. *Merck & Co. v. Biocraft Laboratories*, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989). See also *Celeritas Technologies Ltd. v. Rockwell International Corp.*, 150 F.3d 1354, 1361, 47 USPQ2d 1516, 1522-23 (Fed. Cir.1998) (The court held that the prior art anticipated the claims even though it taught away from the claimed invention. "The fact that a modem with a

single carrier data signal is shown to be less than optimal does not vitiate the fact that it is disclosed.").

Applicant argues that the Tadler et al., reference teaches away from the claimed invention because Tadler et al., teach that it cannot detect most bacteremias and not capable of detecting all gram-positive bacteria.

However, it is the examiner's position that disclosed examples and preferred embodiments do not constitute a teaching away from a broader disclosure or nonpreferred embodiments. *In re Susi*, 440 F.2d 442, 169 USPQ 423 (CCPA 1971). "A known or obvious composition does not become patentable simply because it has been described as somewhat inferior to some other product for the same use." *In re Gurley*, 27 F.3d 551, 554, 31 USPQ2d 1130, 1132 (Fed. Cir. 1994). The invention was directed to an epoxy impregnated fiber-reinforced printed circuit material. The applied prior art reference taught a printed circuit material similar to that of the claims but impregnated with polyester-imide resin instead of epoxy. The reference, however, disclosed that epoxy was known for this use, but that epoxy impregnated circuit boards have "relatively acceptable dimensional stability" and "some degree of flexibility," but are inferior to circuit boards impregnated with polyester-imide resins. The court upheld the rejection concluding that applicant's argument that the reference teaches away from using epoxy was insufficient to overcome the rejection since "Gurley asserted no discovery beyond what was known in the art." 27 F.3d at 554, 31 USPQ2d at 1132. Therefore contrary to applicants' argument, the prior art does not teach away from the instant claims, since Tadler et al., teach a binding agent which detects a gram-positive bacteria. It is noted

that the claims do not require the binding agents to detect all of the gram-positive bacteria or an entire class of microorganisms. Therefore, applicants' arguments are not persuasive.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it would have been prima facie obvious to modify the simultaneous multiple analyte detection immunoassay taught by Chan by incorporating a set of binding agents as taught by McLaughlin and Tadler et al., since McLaughlin teach antibodies which specifically bind to gram-negative bacteria in order to determine their presence and/or absence while Tadler et al., teach well known binding agents that binds lipotechoic acid of gram-positive bacteria. One would have a reasonable expectation of success in utilizing a set of binding agents that bind to gram-negative and positive bacteria detection assays in a known multiple analyte simultaneous detection assays to test samples of blood since using binding agents to detect antigens is well known in the art. Moreover both McLaughlin and Tadler et al, teach using samples for practice of the claimed method of detection wherein the sample are whole blood, serum, and tissue and/or fluids, just as

instantly claimed. Therefore applicants' arguments are not persuasive and the rejection is maintained.

Applicants argue that one would not have expected that an immunoassay as claimed would be effective in screening blood.

However, the standard is that at least some degree of predictability is required and applicants have presented no evidence that there was NO reasonable expectation of success. Obviousness does not require absolute predictability, however, at least some degree of predictability is required. Evidence showing there was no reasonable expectation of success may support a conclusion of nonobviousness. Whether an art is predictable or whether the proposed modification or combination of the prior art has a reasonable expectation of success is determined at the time the invention was made. *Ex parte Erlich*, 3 USPQ2d 1011 (Bd. Pat. App. & Inter. 1986) (Although an earlier case reversed a rejection because of unpredictability in the field of monoclonal antibodies, the court found "in this case at the time this invention was made, one of ordinary skill in the art would have been motivated to produce monoclonal antibodies specific for human fibroblast interferon using the method of [the prior art] with a reasonable expectation of success." 3 USPQ2d at 1016 (emphasis in original).). Therefore, applicants' argument is not persuasive. It is noted that none of the references supplied state that there was no reasonable expectation of success.

The Henney publication states that the technology associated with disease detection in blood donors is continually improving however risk remain. The fact that

risks remain does not teach no reasonable expectation of success, but rather imply that there are associated disadvantages.

Likewise, the Goldman reference points out problems associated with detection assays, however there is no teaching of a lack ok reasonable expectation of success, but rather highlights disadvantages.

Hoppe, Bjajchman, Barrett and Jacobs are drawn towards effective monitoring methods and providing more sensitive and specific methods of screening, however none of the references state that there is no reasonable expectation of success, but rather point to continuing development in the area and admit that improvements in testing have occurred and will need continue to occur.

The Svoboda reference says that there is not fully satisfactory method for monitoring blood and there are associated disadvantages. However disadvantages do not equate to non-working tests. Furthermore, disadvantages are found with every assay, so the fact that there are known disadvantages does not teach away from a reasonable expectation of success. Also, there is no disclosure of what a fully satisfactory method requires. For instance low cost may make a method fully satisfactory, however low cost, has no bearing on the expectation of success.

Klein et al., state that chemiluminescence is no longer being pursued in the screening and detection methods, However, neither the prior art references nor the instant claims are limited to chemiluminscent methods, therefore, this reference is not commensurate in scope to the teachings of the prior art.

The Wagner reference states that it is difficult to estimate what level of bacteria constitutes dangerously high levels of bacteria. However, the difficultly associated with determining an acceptable level of bacteria in blood, does not determine whether there is a reasonable expectation of success for detecting a gram-negative or gram-positive bacteria in a sample. Rather, the problem addressed by the article is what level of bacteria causes a septic event, not whether detection of bacteria will or will not occur. Moreover, the articles reference to detection of a broad range of species is not cured by the instant claims since the instant claims only require that a bacterial antigen is detected, not each and every gram-negative and gram-positive bacterial antigen be detected.

The Wagner and Robinette references states that no detection technique has been developed that meets all of the requirements for a successful test. However, the standards for a successful test are not commensurate in scope to the standards that provide a reasonable expectation of success. The article references to requirements that include affordability, however an affordability standard is beyond the scope of the claims. Moreover, the articles discuss the problems associated with automation, however the claims are not drawn to such. Therefore, the statement of this article is not persuasive on the issue of reasonable expectation of success, since the standard of success measured by the instant claims is only whether a binding agent will be a gram-negative or gram-positive antigen in the screening assay and not the adaptability of the method to mass testing surroundings and associated cost analysis.

Applicants argue that the use of the method has patentable weight. However, it is the examiner position that the functional recitation must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. The functional limitation of the instant claims does not result in a structural difference. If the prior art structure is capable of performing the intended use, then it meets the claim. In this case the prior art is capable of performing the intended function. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Therefore "A known or obvious composition does not become patentable simply because it has been described as somewhat inferior to some other product for the same use." In re Gurley, 27 F.3d 551, 554, 31 USPQ2d 1130, 1132 (Fed. Cir. 1994). As such applicants claim of using the method to determine when to transfer to a donor does not provide patentable weight when evaluating the method claims.

Therefore, for all of the reasons stated above, applicants' arguments are not persuasive and the rejection is maintained.

5. The rejection of claims 2 and 15 under 35 U.S.C. 103(a) as being unpatentable over Chan, McLaughlin and Tadler et al., as applied to claims 1 and 14 above, and further in view of Chang et al., (US Patent 5,200,323) is maintained for the reasons previously stated in the prior office action. The rejection was on the grounds that it would have been prima facie obvious to modify the method of screening by using blood

or blood product determined to have an absence of clinically relevant amount of bacteria as taught by as taught by Chan, McLaughlin and Tadler et al., since Chang et al., teach it is beneficial to screen blood to prevent contamination.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, one would have a reasonable expectation of success in utilizing blood screened with in vitro screening assays to determine the safety of the blood prior to clinical use. Moreover Chan, McLaughlin and Tadler et al, all teach in vitro screening assays capable of determining the presence or absence of a bacterial antigen. Therefore, applicants' argument is not persuasive and the rejection is maintained.

6. The rejection of claim 7 under 35 U.S.C. 103(a) as being unpatentable over Chan (EP 461,462) in view of Tadler et al., (1989) is maintained for the reasons previously stated in the prior office action. The rejection was on the grounds that it would have been prima facie obvious to modify the simultaneous multiple analyte detection immunoassay taught by Chan by incorporating a multiple binding agents as taught by

McLaughlin, since McLaughlin teach antibodies which specifically bind to gram-negative bacteria in order to determine their presence and/or absence.

Applicants argument that there is no suggestion to combine the references, is not persuasive because one would have a reasonable expectation of success in utilizing a set of binding agents that bind to gram-negative detection assays in a known multiple analyte simultaneous detection assay to test samples of blood. Moreover McLaughlin uses samples suitable for practice of the method of detection to include whole blood, serum, and tissue and/or fluids. Therefore, applicants' argument is not persuasive and the rejection is maintained.

7. The rejection of claims 8 and 18 under 35 U.S.C. 103(a) as being unpatentable over Chan (EP 461,462) in view of McLaughlin (US Patent 4,683,196) is maintained for the reasons previously stated in the prior office action. The rejection was on the grounds that it would have been prima facie obvious to modify the simultaneous multiple analyte detection immunoassay taught by Chan by incorporating a multiple binding agents as taught by McLaughlin, since McLaughlin teach antibodies which specifically bind to gram-negative bacteria in order to determine their presence and/or absence.

Applicants argument that there is no suggestion to combine the references, is not persuasive because one would have a reasonable expectation of success in utilizing a set of binding agents that bind to gram-negative detection assays in a known multiple analyte simultaneous detection assay to test samples of blood. Moreover McLaughlin teaches radiometric techniques, like Chan.

Therefore, applicants' argument is not persuasive and the rejection is maintained.

New Grounds of Rejection

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 23-25 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This is a written description rejection.

Claims 23 and 24 recite an antigen-binding fragment thereof and a small molecule. The written description in this case only sets forth specific molecules, therefore the written description is not commensurate in scope with the claims drawn to an antigen-binding fragment thereof and a small molecule. Neither the specification nor the claims teach how to define an antigen-binding fragment thereof and a small molecule. Neither the claims nor the specification teach how to obtain such antigen-binding fragments thereof and small molecules. There is no guidance as to what the antigen-binding fragments thereof and small molecules are; or what fragments and small molecules can or cannot be used in the method being claimed. The specification does not include structural examples of antigen-binding fragments thereof and small molecules. Thus, the resulting antigen-binding fragments thereof and small molecules could result in a complexes not taught and enabled by the specification.

Vas-Cath Inc. V. Mahurkar, 19 USPQ2d 1111, clearly states that "applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession *of the invention*. The invention is, for purposes of the 'written description' inquiry, *whatever is now claimed*." (See page 1117). The specification does not "clearly allow persons of ordinary skill in the art to recognize that [he or she] invented what is claimed." (*See Vas-Cath* at page 1116).

Applicant is reminded that *Vas-Cath* makes clear that the written description provision of 35 USC 112 is severable from its enablement provision (see page 115).

With the exception of specifically named antibodies and molecules, the skilled artisan cannot envision the detailed structure of the antigen-binding fragment thereof and small molecules, thus conception is not achieved until reduction to practice has occurred, regardless of the complexity or simplicity of the method of isolation. An adequate description requires more than a mere statement that it is part of the invention and a reference to a potential method of isolating it. Furthermore, *In The Reagents of the University of California v. Eli Lilly* (43 USPQ2d 1398-1412), the court held that a generic statement which defines a genus of by only their functional activity does not provide an adequate description of the genus. The court indicated that while Applicants are not required to disclose every species encompassed by a genus, the description of a genus is achieved by the recitation of a representative number of molecules falling within the scope of the claimed genus.

Therefore the full breadth of the claims fail to meet the written description provision of 35 USC 112, first paragraph.

9. Claims 24 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This is a new matter rejection.

Neither the specification nor originally presented claims provides support for a method that binds gram-negative bacteria wherein an antibiotic, not vancomycin can be used as a binding agent of gram-negative bacteria.

Applicant did not point to support in the specification for a method that binds gram-negative bacteria wherein an antibiotic, not vancomycin can be used as a binding agent of gram-negative bacteria. Applicant has broadly pointed to pages 4-6, 24-27, 29-31 and 33-34 of the instant specification and claims for support of the amendment, however it appears that the entire specification appears to fail to recite support for the newly recited binding ability of the antibiotic. Therefore, it appears that there is no support in the specification. Therefore, applicants must specifically point to page and line number support for the method that binds gram-negative bacteria wherein an antibiotic, not vancomycin can be used as a binding agent of gram-negative bacteria as recited by the newly added amendments. Therefore, the new claims incorporate new matter and are accordingly rejected.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ja-Na Hines whose telephone number is 703-305-0487. The examiner can normally be reached on Monday-Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynette Smith can be reached on 703-308-3909. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-4242 for regular communications and 703-308-4242 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.

Ja-Na Hines
February 5, 2003

LYNETTE R.F. SMITH
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